310-1258

#15/Appeal Brief w/EOT(2)
S.E.
11-19-03

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

APPLICANT:	Timothy R. Bratton
SERIAL NO.:	09/505,486
FILING DATE:	February 16, 2000
TITLE:	AUDIO SYNTHESIS USING DIGITAL SAMPLING OF CODED WAVEFORMS
EXAMINER:	Firmin Backer
GROUP ART UNIT:	3621
ATTY. DKT. NO.:	21685-06238

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Appeal Brief- Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below:

Dated: Nov. 5, 2003 By: Robert A. Hulse

Robert A. Hulse, Reg. No.: 48,473

MAIL STOP APPEAL BRIEF- PATENTS
COMMISSIONER FOR PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450

APPEAL BRIEF

Real Party in Interest

The subject application is owned by Listen.com, Inc., a California corporation.

Related Appeals and Interferences

There are no known related appeals or interferences that may directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

Status of Claims

Claims 1-49 are pending in this application and stand rejected after a final Office Action. Applicant appeals the rejection of claims 1-49, which are set forth in an attached appendix.

Status of Amendments

Applicant has not amended the claims after the final rejection.

Summary of the Invention

The invention relates to the coding, transmission, and reproduction of audio signals. An audio signal includes one or more of music, voices, or other sounds and may be encoded in an electronic media file. Before a media file is transmitted, one or more selected segments of the media file are removed, leaving a remainder data file that is a decimated version of the original media file. Because the media is divided into two or more parts, no combination of less than all the parts will enable reconstruction of the original media. (Specification, p. 13, lines 15-18.). In the Specification, Fig. 2A shows an example media file, and Figs. 2B and 2C show a remainder data file and removed segments, respectively, corresponding to the media file. The remainder data file and the removed segments are then transmitted over communication channels 53 and 55, as shown in Fig. 3. (Spec., p. 8, line 32 to p. 9, line 2.)

To further enhance the secure communication of the media, the remainder data file may be encrypted. If encrypted, the associated encryption key may be derived from the removed segments. (Spec., p. 13, lines 24-26.)

A data supplement includes information for allowing recombination of the removed segments with the remainder data file. This information may include the location, size, and

placement of the removed segments in the original media file. The data supplement may also contain an encryption key for the remainder file (if encrypted), and it may be transmitted in a file containing the removed segments. (Spec., p. 8, lines 14-28.)

One application of the invention is enabling access to media over low-bandwidth communications devices. In one example, the bulk of the sounds needed to reproduce a media object are pre-loaded onto a device over a high-bandwidth connection. Because this portion of the transmitted media has critical information removed, the recipient cannot reproduce the media without additional information. The removed segments can then be transmitted at a later time, such as upon purchase of the media, and over another distribution channel. Because these removed segments can be a relatively small amount of data, a lower bandwidth connection (e.g., a wireless connection) can be used to transmit them. (Spec., p. 5, lines 9-15.) Once all portions of the media are received, they are decrypted if necessary and combined to reconstruct the media.

Issues

The issue presented for review is whether claims 1-49 are anticipated by U.S. Patent 5,889,860 to Eller et al. under 35 U.S.C. § 102(e).

Grouping of Claims

For the purpose of this appeal only, the claims stand or fall according to the following groupings:

I. Claims 1, 4, 5, 9-11, 22, 23, 27-30, 33, 34, 36, 37, 41-44, 47, and 48 stand or fall together.

II. Claims 26 and 40 stand or fall together.

III. Claims 2, 6-8, 12-15, 17-21, 24, 31, 32 38, 45, and 46 stand or fall together.

IV. Claims 3, 25, 35, 39, and 49 stand or fall together.

V. Claim 16 stands or falls by itself.

Argument

I. Eller does not disclose removing segments from the media to produce a specified data file.

The examiner rejected claims 1-49 under 35 U.S.C. § 102(e) as anticipated by U.S. Patent 5,889,860 to Eller et al. To anticipate a claim under § 102, a prior art reference must describe each and every element as set forth in the claim, either expressly or inherently. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999); *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987); *see also* MPEP § 2131. The rejection was improper because Eller does not describe all of the limitations of the rejected claims.

Representative claim 1 includes the steps of "removing one or more selected segments of the assembly, to produce a specified data file" and "communicating the encoded or encrypted specified data file in a first selected communication channel and communicating the removed segments in a second selected communication channel."[1] The claimed invention thus divides an assembly of information-bearing sounds (represented for example in a media file) into complementary parts: (1) a "specified data file" and (2) the "removed segments." Because the

[1] The distinctions between claim 1 and Eller outlined in this section also apply to limitations in the other independent claims. For example, claim 22 recites, "dividing the digital sound file into first and second data files." Claims 30 and 44 recite, "receiving an encrypted first data file in a first communication channel," and, "receiving a second data file in a second selected communication channel." Claim 36 recites, "dividing the digital sound file into first and second data files." Conversely, independent claims 12, 30, and 44 are drawn to recombining portions or segments of a previously divided media file to reconstruct the media.

assembly is divided into these separate parts, the different parts can be delivered to a user at different times and/or through different communication channels. After receiving all of the parts of the assembly, but not until then, a user can reconstruct the original assembly and access the information-bearing sounds therein.

Eller is fundamentally different. Nowhere does Eller disclose or suggest dividing the media to be distributed or removing segments from a media file. In fact, Eller teaches just the opposite. As shown in Eller's Fig. 4 and described at col. 8, lines 35-44, Eller's single media file is compressed and at least partially encrypted (step 76), the single file is transmitted to a client (step 86), and the single file is then decrypted and decompressed by the client software (step 88). Unlike the claimed invention, therefore, Eller's media file is never divided into multiple portions.

In rejecting the claims, the examiner relied on an embodiment described in Eller in which a portion of a media file is encrypted. However, merely encrypting a portion of a file is not the same as removing segments from the file. In Eller, a single media file containing all of the information necessary to recreate the original media file is delivered to a user. Although Eller's media file may be partially encrypted, it is always intact. Accordingly, if someone obtained Eller's partially encrypted file without authorization and hacked the encryption, that person could access Eller's media.

In the claimed invention, the media is divided into two separate files, neither of which is sufficient to recreate the original file. This distinction is important. It provides an additional layer of security and enables alternative methods of delivering media that Eller simply cannot perform. This claimed feature also allows different portions of the media to be transmitted in different communication channels and/or at different times.

Therefore, claims 1-49, in Groups I-V, are patentable over Eller.

II. Eller does not disclose communicating the separate parts of the divided media in different communication channels.

Because Eller discloses a scheme that is fundamentally different than the claimed invention, it similarly fails to disclose or suggest many of the dependant claim limitations. For example, claims 26 and 40 require that "the first and second communication channels are different channels." The ability to send portions of the media over separate communication channels provides additional flexibility for distributing the media. For example, a large portion of the media could be transmitted over a high-bandwidth network and a small portion of the media of the media could be transmitted over a lower bandwidth network.

Eller does not disclose this limitation. It is first noted that the examiner has provided no citation to Eller that describes the limitation of different communication channels. Although this limitation appears only in claims 26 and 40, the examiner summarily rejected those claims "under the same rationale" as provided for claims 1-21. But that rationale does not discuss this limitation. Moreover, a review of Eller shows that the examiner cannot carry his burden of showing this limitation in the reference. Eller teaches that all communications between the client and server are over the same communication channel, not different ones. (*See* Eller, Figs.1, 3-5, 8.)

Not only does Eller fail to disclose this claimed feature, such a feature is impossible in Eller. As explained above, Eller does not divide the media into two or more separate parts. Because Eller's media file remains intact when transmitted to a purchaser, Eller could not logically send the media file over two different communication channels.

Claims 26 and 40, in Group II, are therefore patentable over Eller for these additional reasons.

III. Eller does not disclose a "data supplement" containing information that allows reconstruction of the media.

Claims 2, 6-8, 12-21, 24, 31, 32 38, 45, and 46 recite a "data supplement," which allows the media file to be reconstructed. For example, claim 12 recites using the data supplement "to decode or decrypt the encoded or encrypted first data file and to position at least a first sequence and a second sequence, drawn from the second data file, within the first data file." Claim 32 recites using the data supplement "to position the segments from the first and second data files into the digital sound file." Accordingly, the claimed data supplement includes information that allows the removed segments to be reinserted in their proper location in the original media file.

Eller does not disclose or suggest such a data supplement. Because Eller never divides the media into two or more separate parts, it needs no mechanism for recombining those parts to reconstruct the media. The claimed data supplement thus has no relevancy to Eller, and Eller does not disclose one. The disclosure in Eller that the final Office Action cites (col. 2, lines 15-47 and col. 4, lines 15-64) has no bearing on the claimed data supplement.

Claims 2, 6-8, 12-21, 24, 31, 32 38, 45, and 46, in Groups III and IV,[2] are therefore patentable over Eller for these additional reasons.

IV. Eller does not describe encrypting the remaining segments based on the removed segments.

Claims 3, 16, 25, 35, 39, and 49 recite encrypting the remaining portion of the media based on information from the removed portions of the media. For example, claims 3, 25, and 39 recite an encryption/encoding key having at least one key parameter that "uses information from

[2] Claim 16 is grouped separately because the arguments made in both Section IV also apply to it.

at least one of [the] removed segments"; claim 16 recites the step, "determining at least one parameter of said encoding/encryption key using information in said second data file"; claim 31 recites that "at least one parameter of the key determined from information in the second data file;" and claims 35and 49 recites that "at least one parameter of the key determined from information in the second data file." By encrypting one portion of the divided media with information from another portion, the system can transmit the media file without having to transmit a separate encryption key. In a sense, one of the portions of the media is used to unlock the other. Eller does not disclose this.

In col. 2, lines 22-25, Eller discloses using a customer-specific encryption key that is related to the customer for tracking purposes. Eller's encryption key is not based on the removed segments of the media file. Indeed, Eller's key cannot logically be based on the removed segments because Eller never removes segments from the original media file. Eller therefore does not describe this claimed limitation.

Claims 3, 16, 25, 35, 39, and 49, in Groups IV and V, are therefore patentable over Eller for these additional reasons.

Summary

Eller's disclosure is fundamentally different from the claimed invention. Eller does not disclose or suggest removing segments from the original media or dividing a media file into at least two files for communication in first and second communication channels. Importantly, Eller's teaching of encrypting a portion of a media file is not the same as, nor does it suggest, removing segments from the file. Underscoring this point, Eller completely lacks any description

of the dependant claim limitations discussed in Sections II through IV of these Arguments, and such limitations would be illogical if applied to Eller.

Accordingly, Applicant believes that the rejection of claims 1-49 was erroneous and respectfully request the Board to reverse that rejection.

Respectfully submitted,

TIMOTHY R. BRATTON

Dated: Nov. 5, 2003

By: _____

Robert A. Hulse, Reg. No.: 48,473
Fenwick & West LLP
801 California Street
Mountain View, California 94041
Tel: (415) 875-2444
Fax: (415) 395-0879

Appendix: Claims Involved in Appeal

1. A method of encoding or encrypting data, comprising:

providing an assembly of information-bearing sounds (ISA);

removing one or more selected segments of the assembly, to produce a specified data file;

providing an encoding/encryption key and encoding or encrypting the specified data file; and

communicating the encoded or encrypted specified data file in a first selected communication channel and communicating the removed segments in a second selected communication channel.

2. The method of claim 1, further comprising providing a data supplement that indicates at least one of: location of at least one of said removed segments within said ISA; size of at least one of said removed segments within said ISA; number of segments removed; separation distance between two consecutive removed segments within said ISA; and a selected portion of said encoding/encryption key; and

communicating said data supplement in said second selected communication channel.

3. The method of claim 1, further comprising providing said encoding/encryption key with at least one key parameter that uses information from at least one of said removed segments.

4. The method of claim 1, further comprising selecting said first and second communication channels to be the same channel.

5. The method of claim 1, further comprising providing said second channel as a secure communication channel.

6. The method of claim 1, further comprising concatenating said removed segments and said data supplement as a concatenated data file.

7. The method of claim 6, further comprising encrypting said specified data file using cipher block chaining of at least one block of said concatenated data file and at least one encrypted block from said specified data file.

8. The method of claim 7, further comprising providing said at least one encryption parameter for said encoding/encryption key by providing a block of said concatenated data file as an initial block for said at least one encrypted block of said data.

9. The method of claim 1, further comprising removing at least first and second segments from said data file, where the first segment and the second segment have equal length.

10. The method of claim 1, further comprising removing at least first and second segments from said data file, where the first segment and the second segment have different lengths.

11. The method of claim 1, further comprising combining said removed segments with said specified data file to form a combined data file and reproducing the combined data file as an assembly of sounds.

12. A method of decoding or decrypting data, comprising:

providing an encoded or encrypted first data file;

providing a second data file and a data supplement that indicates at least one of: an assigned location of at least one designated segment of the second data file within a non-coded and non-encrypted version of the first data file; size of at least one designated segment of the second data file within the non-coded and non-encrypted first data file; number of selected segments designated; separation distance of at least two consecutive designated segments of the second data file within the non-coded and non-encrypted first data file; and a selected portion of an encoding/encryption key used to encoded or encrypt the first data file; and

using the data supplement to decode or decrypt the encoded or encrypted first data file and to position at least a first sequence and a second sequence, drawn from the second data file, within the first data file.

13. The method of claim 12, further comprising: providing said encoded or encrypted first data file on a first communication channel and providing said concatenation of said second data file and said data supplement on a second communication channel.

14. The method of claim 13, further comprising selecting said first and second communication channels to be the same channel.

15. The method of claim 13, further comprising providing said second channel as a secure communication channel.

16. The method of claim 19, further comprising determining at least one parameter of said encoding/encryption key using information in said second data file.

17. The method of claim 12, further comprising providing said encoded or encrypted first data file using cipher block chaining of at least one block of said concatenation of said second data file and said data supplement and at least one encoded or encrypted block from said first data file.

18. The method of claim 17, further comprising providing at least one encoding/encryption key parameter for said encoding/encryption key by providing at least one of said first sequence and said second sequence as an initial block for said at least one encoded/encrypted block of said data.

19. The method of claim 12, further comprising providing said second data file and said data supplement as a concatenated data file.

20. The method of claim 12, further comprising combining said removed segments with said specified data file to form a combined data file and reproducing the combined data file as an assembly of sounds.

21. A method of communicating data, the method comprising:

providing an assembly of information-bearing sounds as a digital file of data;

removing one or more selected segments from the data file, to produce a specified data file having at least a first block and a second block;

providing an encoding/encryption key having at least a first key portion and a second key portion;

providing a data supplement that indicates at least one of: location of at least one of the removed segments within the data file; size of at least one of the removed segments within the data file; number of segments removed; separation distance between two consecutive removed segments within the data file; and at least a portion of the encoding/encryption key;

encoding or encrypting the first block and the second block of the specified data file, using the first portion and the second portion, respectively, of the encoding/encryption key; and

communicating the encoded or encrypted specified data file in a first selected communication channel and communicating the removed segments and the data supplement in a second selected communication channel.

22. A method for delivering a digital sound file, the method comprising:

dividing the digital sound file into first and second data files;

encrypting at least a portion of the first data file using an encryption key;

communicating the encrypted first data file in a first communication channel; and

communicating the second data file in a second selected communication channel.

23. The method of claim 22, wherein the digital sound file comprises a plurality of segments, and the dividing the digital sound file into first and second data files comprises:

removing a portion of the plurality of segments from the digital sound file;

storing the removed segments in the first data file; and

storing the un-removed segments in the second data file.

24. The method of claim 23, wherein the second data file includes a data supplement that indicates at least one of:

location within the digital sound file of the removed segments,

size of the removed segments,

number of removed segments,

separation distance between two consecutive removed segments within the digital sound file, and

a portion of the encryption key.

25. The method of claim 22, wherein the encryption key includes a key parameter that uses information from at least one of the removed segments.

26. The method of claim 22, wherein the first and second communication channels are different channels.

27. The method of claim 22, wherein the second channel comprises a secure communication channel.

28. The method of claim 22, wherein one of the first and second data files is substantially larger than the other.

29. The method of claim 22, further comprising:

decrypting the encrypted first data file; and

combining the first and second data files to reform the digital sound file.

30. A method for creating a digital sound file, comprising:

receiving an encrypted first data file in a first communication channel;

receiving a second data file in a second selected communication channel;

decrypting the encrypted first data file; and

combining the first and second data files to form the digital sound file.

31. The method of claim 30, wherein the second data file includes a data supplement that indicates at least one of:

location within the digital sound file of the removed segments,

size of the removed segments,

number of removed segments,

separation distance between two consecutive removed segments within the digital sound file, and

a portion of an encryption key for decrypting the encrypted first data file.

32. The method of claim 31, wherein the first and second data files each include one or more segments, and combining the first and second data files to form the digital sound file comprises:

using the data supplement to position the segments from the first and second data files into the digital sound file.

33. The method of claim 30, wherein the second channel comprises a secure communication channel.

34. The method of claim 30, wherein one of the first and second data files is substantially larger than the other.

35. The method of claim 30, wherein decrypting the encrypted first data file includes using a key, at least one parameter of the key determined from information in the second data file.

36. A computer program product comprising a computer-readable medium containing computer program code for delivering a digital sound file, the computer program code comprising instructions for:

dividing the digital sound file into first and second data files;

encrypting at least a portion of the first data file using an encryption key;

communicating the encrypted first data file in a first communication channel; and

communicating the second data file in a second selected communication channel.

37. The computer program product of claim 36, wherein the digital sound file comprises a plurality of segments, and the dividing the digital sound file into first and second data files comprises:

removing a portion of the plurality of segments from the digital sound file;

storing the removed segments in the first data file; and

storing the un-removed segments in the second data file.

38. The computer program product of claim 37, wherein the second data file includes a data supplement that indicates at least one of:

location within the digital sound file of the removed segments,

size of the removed segments,

number of removed segments,

separation distance between two consecutive removed segments within the digital sound file, and

a portion of the encryption key.

39. The computer program product of claim 36, wherein the encryption key includes a key parameter that uses information from at least one of the removed segments.

40. The computer program product of claim 36, wherein the first and second communication channels are different channels.

41. The computer program product of claim 36, wherein the second channel comprises a secure communication channel.

42. The computer program product of claim 36, wherein one of the first and second data files is substantially larger than the other.

43. The computer program product of claim 36, further comprising:

decrypting the encrypted first data file; and

combining the first and second data files to reform the digital sound file.

44. A computer program product comprising a computer-readable medium containing computer program code for creating a digital sound file, the computer program code comprising instructions for:

receiving an encrypted first data file in a first communication channel;

receiving a second data file in a second selected communication channel;

decrypting the encrypted first data file; and

combining the first and second data files to form the digital sound file.

45. The computer program product of claim 44, wherein the second data file includes a data supplement that indicates at least one of:

location within the digital sound file of the removed segments,

size of the removed segments,

number of removed segments,

separation distance between two consecutive removed segments within the digital sound file, and

a portion of an encryption key for decrypting the encrypted first data file.

46. The computer program product of claim 45, wherein the first and second data files each include one or more segments, and combining the first and second data files to form the digital sound file comprises:

using the data supplement to position the segments from the first and second data files into the digital sound file.

47. The computer program product of claim 44, wherein the second channel comprises a secure communication channel.

48. The computer program product of claim 44, wherein one of the first and second data files is substantially larger than the other.

49. The computer program product of claim 44, wherein decrypting the encrypted first data file includes using a key, at least one parameter of the key determined from information in the second data file.